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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,713	03/18/2004	Chao-Hsiang Yang	67,200-967	7508

7590 07/18/2006

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EXAMINER

MONDT, JOHANNES P

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/804,713

Applicant(s)

YANG, CHAO-HSIANG

Examiner

Johannes P. Mondt

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6, 9-14, 16-20, 22-25 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-3, 6, 9-14, 16-20, 22-25 and 28 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination ("RCE") under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/5/06 has been entered.

### ***Response to Amendment***

Amendment filed 4/11/06 has been entered in light of aforementioned RCE. In said Amendment Applicant amended the specification and amended all but one claim in so far as not cancelled. However, no action on the merits is provided at this time, and instead a requirement for an election of species is proper because of the following considerations:

Applicant has presented, through said Amendment, a substantial mixture of different and alternatively disclosed embodiments, see, e.g., claim 1, wherein the embodiment of Figure 2 (pages 10-12), in which underlying copper interconnect structures extend through a plurality of inter-metal dielectric layers while the fuse (66) is not shown to provide communication between the two top metal lines (64), appears now combined with the embodiment of Figure 3, disclosed as an alternative embodiment and previously separately claimed (claim 6) (see Specification, pages 10 and 13), in which the interconnect structures do not extend through a plurality of inter-metal dielectric

layers. Rather than once again provide rejections inter alia on additional written description problems applicant is herewith respectfully asked to elect among the disclosed species as follows:

***Election/Restrictions***

1. Applicant is required under 35 U.S.C. 121 to elect a single one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claims appear to be generic):
  - Species 1 (Figure 2 and pages 10-12): semiconductor device with fuse 66 formed on *the* (i.e., a single) topmost metallization layer 64 and underlying interconnect structures *extending through a plurality* 54/56 of inter-metal dielectric layers.
  - Species 2 (Figure 3 and page 13): semiconductor device with fuse 80 on and extending between a *plurality* of separated metallization structures 78 wherein, however, underlying interconnect structures *do not extend through a plurality* of inter-metal dielectric layers.

The separately disclosed species are patentably distinct because

(a) the fuse is either supported by one or by a plurality of separated interconnect structures bridged by the fuse, and also because

(b) the fuse is either supported by interconnects extending through a plurality of inter-metal dielectric layers 52/54 ((page 11, [0017]) or by a single inter-metal dielectric layer 28 (see page 13 and [0008] on page 7).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johannes P. Mondt whose telephone number is 571-272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPM  
July 15, 2006

Patent Examiner:

A handwritten signature in black ink, appearing to read 'J. Mondt', with a horizontal line drawn through it.

Johannes Mondt (Art Unit: 3663)